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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,179	09/09/2003	Chan Ho Park	MRE-0063	1631
34610	7590	11/17/2004	EXAMINER	
FLESHNER & KIM, LLP			NGUYEN, JIMMY	
P.O. BOX 221200				
CHANTILLY, VA 20153			ART UNIT	PAPER NUMBER
			2829	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/657,179	PARK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	X
	Jimmy Nguyen	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 09 September 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-13 and 18-33 is/are rejected.
- 7) Claim(s) 14-17 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 09 September 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 –13 and 18 – 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Burward Hoy (US 5977785).

**As to claim 1,** Burward Hoy discloses (fig 2A) device (130) for compensating heat generation in a module IC (115) test handler (110) configured to receive cooling fluid from an exterior source (see fig 4A) and spray the cooling fluid onto module ICs (115) during testing, wherein the device is attached to a press unit (126) including a frame and a plurality of push bars arranged at fixed intervals on a front surface of the frame for pushing edges of modular ICs (115) mounted on carriers (125) to connect the modular ICs (115) to test sockets (128), the device comprising.

at least one supporting member (140, see fig 4A) provided adjacent to the press unit (126) and having a cooling fluid flow passage ( HOT/COLD inlet and outlet) formed therein for flow of cooling fluid; and

at least one cooling fluid spraying unit (COLD inlet, see fig 4A) configured to spray the cooling fluid supplied through the cooling fluid flow passage toward faces of module ICs ( 115) in an oblique direction with respect to a planar surface formed by the at least one cooling fluid spraying unit.

**As to claims 2, 22,** Burward Hoy discloses (fig 4A) the device as claims 1, 21 respectively wherein the at least one cooling fluid spraying unit (COLD inlet, see fig 4A) comprises a plurality of cooling fluid spraying units.

**As to claims 3, 23,** Burward Hoy discloses (fig 4A) the device as claims 1, 21 respectively wherein the at least one supporting member (140) comprises a pair of supporting members, each having a cooling fluid flow ( COLD inlet and outlet) passage formed therein.

**As to claim 4,** Burward Hoy discloses (fig 4A) the device as claimed 3, wherein the at least one cooling fluid spray unit ( COLD inlet and outlet) extends between the pair of supporting members.

**As to claim 5,** Burward Hoy discloses (fig 4A) the device as claimed 3, wherein the at least one cooling fluid spraying unit (COLD inlet, see fig 4A) comprises a plurality of cooling fluid spraying units which each extend between the pair of supporting member (140).

**As to claims 6, 24,** Burward Hoy discloses (fig 2A) the device as claims 3, 23 respectively wherein each of the at least one cooling fluid spraying unit comprises:

a nozzle member (see fig 2A) having ends connected to the cooling fluid flow passages in the at least one pair of supporting members (140) so as to be in communication therewith and arranged be adjacent push bars (126), the nozzle member having at least one cooling fluid spraying hole.

**As to claims 7, 25, 34,** Burward Hoy discloses (fig 2A) the device as claims 6, 24, 32 respectively wherein the nozzle member comprises a plurality of cooling fluid spray holes (spraying holes HCA 130) form at fixed intervals in a longitudinal direction of the nozzle member and directed away in a circumferential direction from a central plane the nozzle member forms, and wherein the plurality of cooling fluid spray holes is configured to spray the cooling fluid guided through the nozzle member toward the modular ICs (115) in an oblique direction.

**As to claims 8, 26,** Burward Hoy discloses (fig 2A) the device as claims 7, 25 respectively wherein the plurality of cooling fluid spray holes (spraying holes HCA 130) are arranged in a plurality of pairs.

**As to claims 9, 27,** Burward Hoy discloses (fig 4A) the device as claims 7, 21 respectively wherein the cooling fluid flow passage in each of the at least one supporting member (140) is divided into a plurality of fluid flow passages ( the support

member is having plurality of holes for the fluid to come out) by at least one partition extending in a lateral direction.

**As to claim 10,** Burward Hoy discloses (fig 4A) the device as claimed 9, wherein the cooling fluid flow passage in each of the at least one supporting member (140) includes three cooling fluid flow passages divided by two partitions respectively.

**As to claims 11, 28,** Burward Hoy discloses (fig 4A) the device as claims 10, 27 respectively wherein the three passages comprise an upper flow passage, a middle flow passage, and a lower flow passages and wherein the upper flow passage is in communication with end portion of the nozzle members and the lower flow passage has an inlet configured to receive the cooling fluid from an exterior.

**As to claims 12, 29,** Burward Hoy discloses (fig 4A) the device as claims 11, 28 respectively wherein the at least one cooling fluid spraying unit ( COLD inlet) each comprise a nozzle member, and wherein the partitions have a plurality of connection holes provided at fixed intervals for flow of the cooling fluid introduced thereto through the lowest flow passage, the middle flow passage, and the upper flow passage.

**As to claims 13, 30,** Burward Hoy discloses (fig 4A) the device as claims 12, 29 respectively wherein ends of nozzle members and the connection holes in the partitions are staggered with respect to one another.

**As to claims 18, 33,** Burward Hoy discloses (fig 4A, 2A) the device as claims 1, 32 respectively wherein the at least one supporting member (140) is arranged in parallel to the press unit (126).

**As to claims 19, 31,** Burward Hoy discloses (fig 4A) the device as claims 1, 21 respectively wherein the at least one cooling fluid spray unit comprises a plurality of cooling fluid spray units, each comprising a nozzle member configured to be interposed between respective push bars of the press unit and extending parallel thereto.

**As to claims 21, 32,** Burward Hoy discloses (fig 2A) a modular IC test handler, comprising:

A plurality of test sockets (128, only one illustrated in the fig);  
A press unit (126) including a frame and a plurality of push bars arranged at fixed intervals on a front surface of the frame for pushing edges of modular Ics (115) mounted on carriers (125) to connect the modular Ics (115) to the plurality of test sockets (128); and

A device for compensating for heat generation from the modular Ics during testing, the device comprising:

at least one supporting member (140, see fig 4A) provided adjacent to the press unit (126) and having a cooling fluid flow passage ( HOT/COLD inlet and outlet) formed therein for flow of cooling fluid; and

at least one cooling fluid spraying unit (COLD inlet, see fig 4A) configured to spray the cooling fluid supplied through the cooling fluid flow passage toward faces of module ICs ( 115) in an oblique direction with respect to a planar surface formed by the at least one cooling fluid spraying unit.

***Allowable Subject Matter***

3. Claims 14 – 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior arts of record are silent the combination of the based claim with upper portion of each of the at least one pair of supporting members is attached to one end of each of the nozzle member and comprises: a lower supporting member having a plurality of pass through holes formed at fixed intervals and configured to receive therein one end portion of each of the nozzle member; and an upper supporting member joined to an upper portion of the lower supporting member and having pass through holes provided at position corresponding to the pass through holes in the lower supporting member, wherein a sealing device is provided between each of the pass through holes in the lower supporting member and each of the pass through holes in the

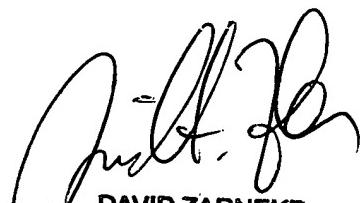
Art Unit: 2829

upper supporting member, thereby fixedly holding the end portions of the nozzle members.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Nguyen at (571) 272-1965. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2900.

JN.  
Nov 12, 2004

  
DAVID ZARNEKE  
PRIMARY EXAMINER  
